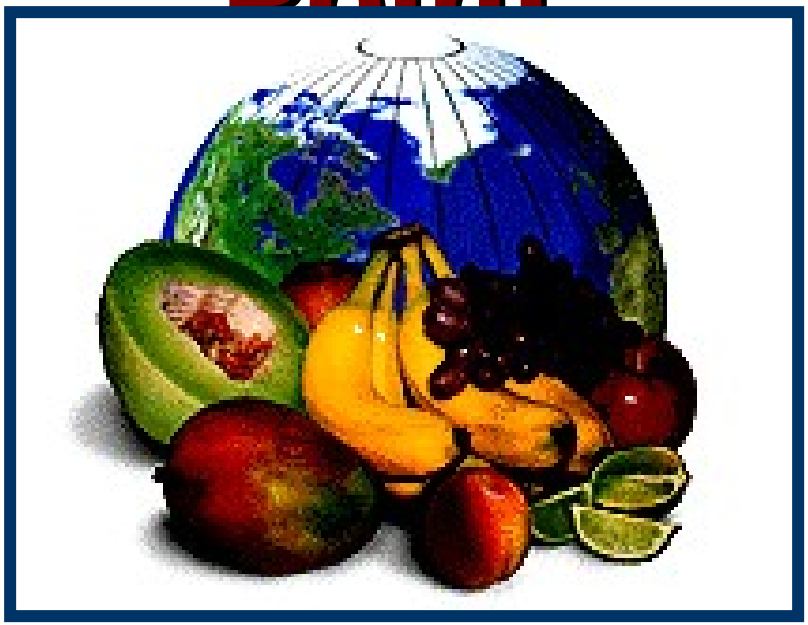
U.S. Army Quartermaster Center and School

Food Service Contract Management

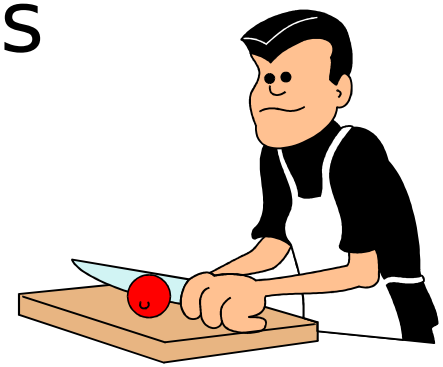
HACCP

Hazard Analysis Critical Control Point



Objectives

- Define HACCP
- Understand HACCP Principles
- Identify Control Points & Critical Control Points
- Know Contract Requirements



What is HACCP?

A safety system designed to protect foods as they flow through a facility (***receipt to***

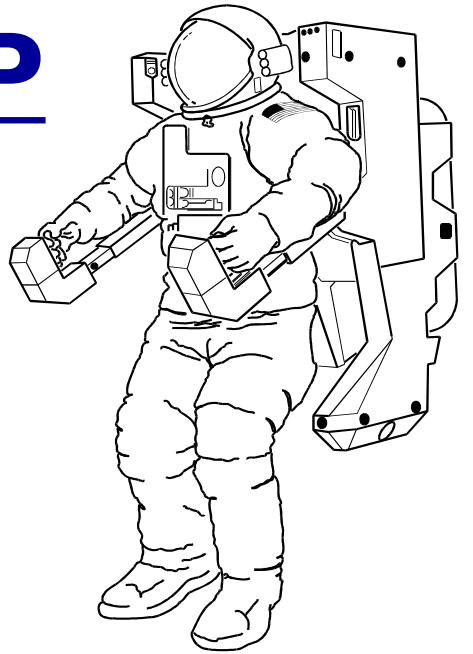
Aligns Processes, Procedures, & Behaviors with Prevention

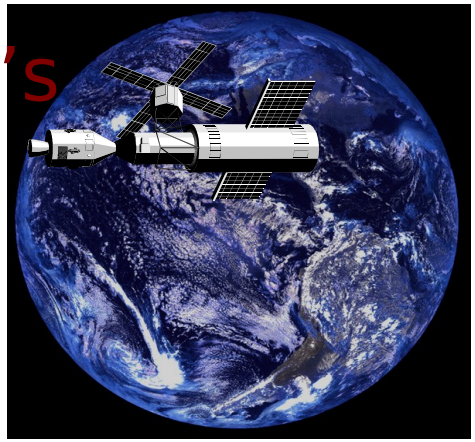
- **Preventive – Rather than Reactive**
- **Rational – Based on Historical Data**
- **Science Based – Time & Temp Studies**
- **Continuous – Problems Detected & Corrected**
- **Comprehensive – Ingredients & Proces**
  nagement &

Manager's primary food safety tool.

Ensures production of safe food.

History of HACCP

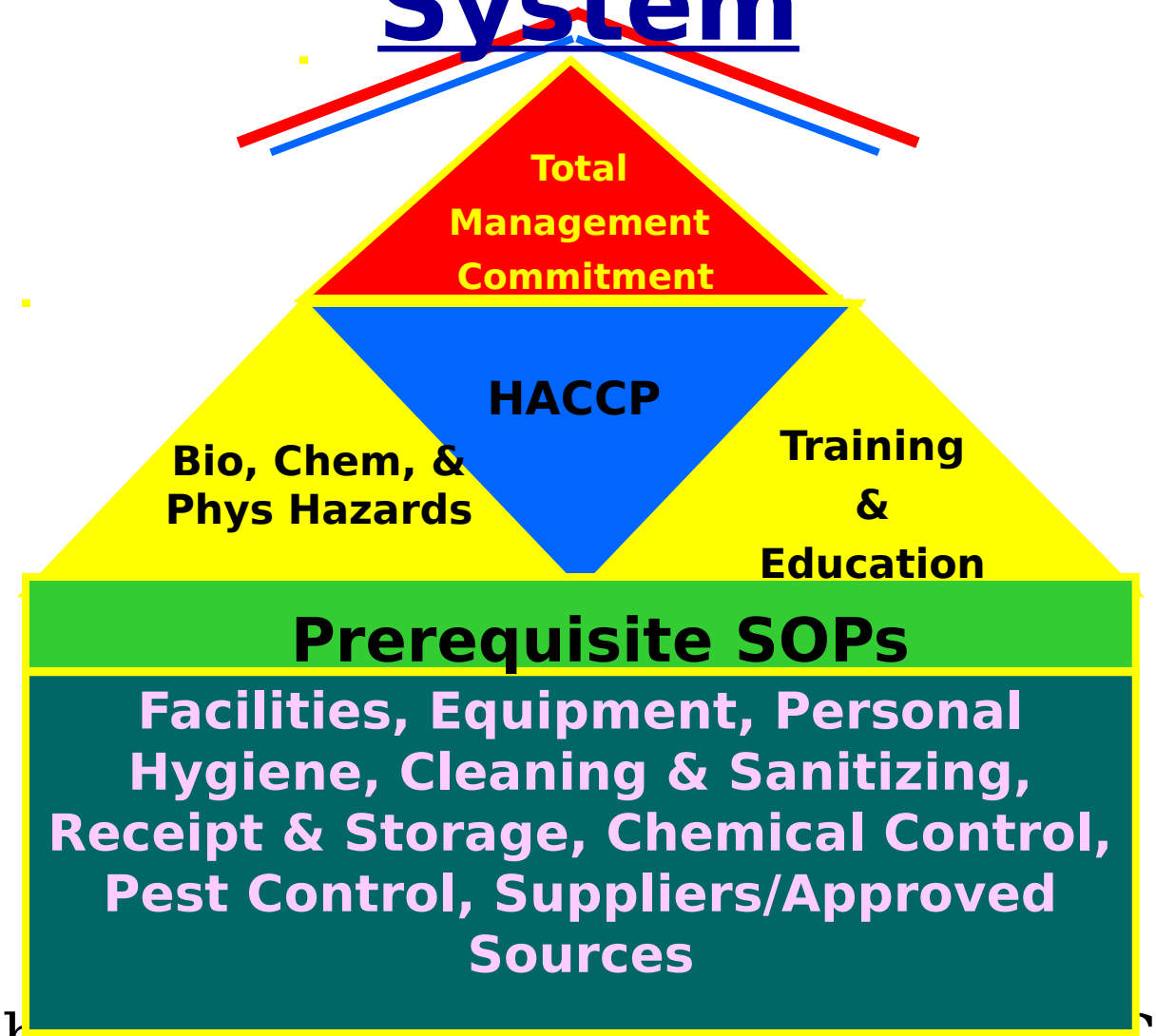




- Pioneered in the ‘60’s by the Pillsbury Co.
- Designed to assure NASA safe food

- Recognized internationally as an effective system of controls.
- Incorporated in FDA Model Food Code & new TB MED 530.

HACCP Foundation System


Total Management Commitment
HACCP
Bio, Chem, & Phys Hazards
Training & Education
Prerequisite SOPs
Facilities, Equipment, Personal Hygiene, Cleaning & Sanitizing, Receipt & Storage, Chemical Control, Pest Control, Suppliers/Approved Sources

HACCP Terms

Risk - Probability that conditions will lead to a hazard.

Control Point - Any step at which biological, chemical, or physical factors can be controlled.

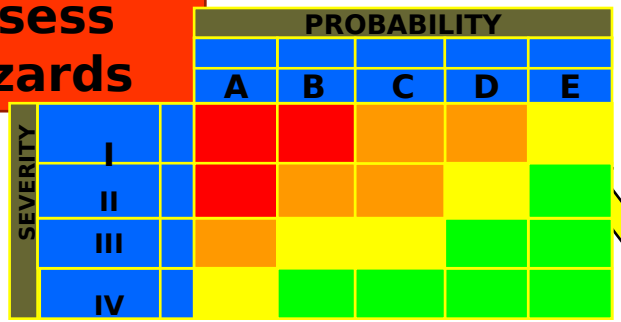
Critical Control Point (CCP) - An Essential Point at which Control can be Applied so that a Food Safety Hazard can be PREVENTED, ELIMINATED, or REDUCED to an Acceptable Level.

CCP – The last step in the flow of food where a hazard can be controlled.

Applying HACCP Principles = Food RM

1 **Conduct a Hazard Analysis** *(ID PHFs & hazards)*

Assess Hazards



2 **Determine Critical Control Points**

Develop Controls

3 **Establish Critical Limits for each CCP**

Implement Controls

4 **Monitor CCPs**

Develop Corrective Actions

5

6 **Verify Program:** *(Review, Revis Evaluate)*

Supervise & Evaluate

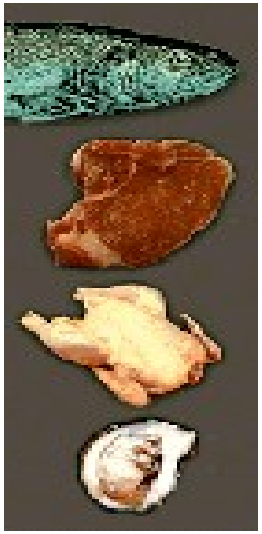
7 **Establis h a Record-Keeping System**

Identify Hazards

The Risk Managemen Process

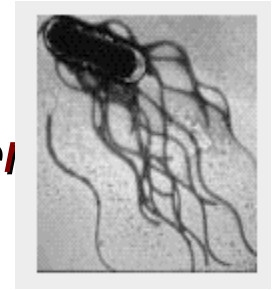
Step 1: Hazard Analysis

- Examine Menu
  (*starting point*)
- Identify Potentially Hazardous Foods



- Chart the Flow of Food
  - Receive
  - Store
  - Prepare
  - Cook
  - Cool
  - Reheat
  - Hot Hold
  - Serve

- Assess Hazards
  - Determine limitations *(equipment & staff)*
  - Examine recipes for clarity and completeness
  - Identify specific hazard *(type of bacte*



Process Approach to HACCP

Typical Food Processes:

1. **Receive - Store - Prepare - Serve (No Cooking)**
2. **Receive - Store - Prepare - Cook - Hold - Serve**
3. **Receive - Store - Prepare - Cook - Hold - Serve - Cool - Re-heat - Hold - Serve (Leftovers)**

- Review all recipes
- Make a chart of the food flow processes
- Group items with similar flow processes
- List the hazards at each step in the flow chart
- Mark the CCPs in the flow chart

Prelude to Step 2

Determine Control Points

Considerations during the flow of food

RECEIVING: Temperature of perishable products

STORING: Time-Temperature

PREPARING: Thawing process; Hand washing

COOKING: Internal cooking temperature

HOLDING: Temp of holding unit (140 ºF)

COOLING: Product density

SERVING: Post-cooking contamination

REHEATING: Equipment; 165 ºF w/in 2 hrs

Step 2: Identify the CCPs

...in the flow of food.

At this step, can...

- Food become contaminated?
- Contaminants increase?
- Contaminants survive?

Can the identified hazard be...

- Prevented, eliminated, or reduced by an operation taken before, during, or after this step?
- Monitored?
- Measured? **How?**
- Documented?

Step 3: Establish Critical Limits

Can be immediately monitored by Measurement or Observation.

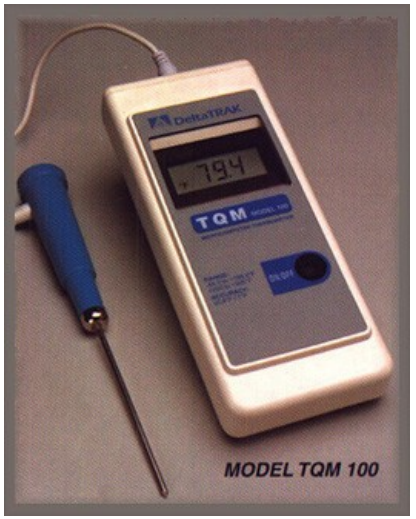
- Critical Limits for CCPs must be Specific.
- Measurements to consider:
  - **TEMPERATURE (internal product)**
  - **TIME (PHFs held in TDZ)**
  - **Chlorine Concentration (ppm)**
  - **pH**

Step 4: Monitoring Procedures

One of the critical factors in controlling bacteria in food is controlling temperature

- **What will be monitored?**
- **How will it be monitored?**
- **Who will monitor? How often?**

Determines loss of control and when a deviation has occurred.



The only reliable way to ensure safety and to determine the "doneness" of most foods.

Step 5: Establish Corrective Actions

- Determine and correct the cause of non-compliance.
- Determine the disposition of the non-compliant product.
- Record actions that have been taken.

Continue to Cook

Reheat to 165 °F

Discard

Step 6: Record Keeping

Documents program, procedures, measurements, & actions.

- **QC File**
- **QC Plan**
- **Inspection Reports**
- **Equipment Calibration & Time/Temp Logs**
- **Training Records**
- **SOPs**

Step 7: Verification

How do you verify Contractor Compliance?

- **Review documentation**
- **Inspections**
  - ✓ Inspection Schedules used?
  - ✓ Random & Planned Inspections used?
  - ✓ Employees following procedures
  - ✓ Review Preventive Med inspections
  - ✓ Corrective Actions?

NATIONAL RESTAURANT ASSOCIATION

A PRACTICAL APPROACH

HACCP

SERVSAFE

VIDEO SERIES

A HACCP CASE STUDY

National Restaurant Association

THE EDUCATIONAL FOUNDATION

Army Minimum Food Risk Management Requirements

- **Reference: AR 30-22; DA PAM 30-22, para. 3-7**
- **Incorporation of HACCP principles:**
  - Monitoring Procedures
  - Application of Critical Limits
  - Record Keeping
- **Defined Processes for Monitoring:**
  - Cold holding & storage
  - Hot holding
  - Cooking
  - Cooling (leftovers, pre-prepared items)

Table 3-1: Minimum Monitoring Requirements

Responsible Agent	Process	Number of Samples &		Monitoring Criteria
Food Operations Sergeant / Manager	Cold Storage	All units	Once each meal period *(Breakfast, Lunch,*	• Monitor all refrigeration units… • Verify the ambient temp… • Record temperature on data log.
Food Operations Sergeant / Manager	Cooking	3 menu items	Each meal period	• Spot-check at least 1 meat, … • Spot-check 2 or more other… • Monitor internal product
Food Operations Sergeant / Manager	Cold Holding	3 items	Each meal period	• Spot-check at least 1 meat, … • Spot-check 2 or more other… • Monitor same menu items… • Record internal food temp…

U.S. Army Quartermaster Center and School Food Service Contract Management

DA 7458 - Cooking

DA 7459 – Hot/Cold Holding & Storage

DA 7460 - Cooling

RISK MANAGEMENT DATA LOG - COOKING
For use of this form, see DA PAM 30-22; the proponent agency is DCS, G4.

1. DATE (YYYYMMDD): 20020531 | 2. MEAL: ☐ BREAKFAST ☒ LUNCH ☐ DINNER ☐ OTHER

PROCESS: COOKING AND/OR REHEATING LEFTOVERS
CATEGORY: 1 (≥ 145F) 2 (≥ 155F) 3 (≥ 165F)

3a. MONITORED BY: SSG Piggott
3b. TITLE: Shift Leader
3c. UNIT: 49th STB DFAC; 8400 Ft. Lee

4. EQUIPMENT NAME	5. FOOD/MENU ITEM AND CATEGORY	6. INTERNAL TEMP (F)	7. TIME	8. CORRECTIVE ACTION (Mandatory for non-compliance)		9. COMMENTS
				CONTINUE COOKING	RECHECK OF TEMP	
Combi oven #1	Roast pork	138	1100	X		re-check temp in 10 minutes; continue to
Range	Leftover					
Steam kettle	Chicken					
Combi oven #2	Steamed					
Griddle, short order #1	Grilled ha					
Deep fat fryer	Chicken					
	Continue cook					

DA FORM 7458

RISK MANAGEMENT DATA LOG - HOT OR COLD HOLDING/STORAGE
For use of this form, see DA PAM 30-22; the proponent agency is DCS, G4.

1. DATE (YYYYMMDD): 20020531 | 2. MEAL: ☐ BREAKFAST ☒ LUNCH ☐ DINNER ☐ OTHER

3. PROCESS: ☒ HOLDING ☒ STORAGE ☐ HOT ☒ COLD
CATEGORY: 4 (hot ≥ 140F) 5 (cold holding ≤ 40F) 6 (cold storage ≤ 38F)

4a. MONITORED BY: SSG Piggott
4b. TITLE: Shift Leader
4c. UNIT: 49th Special Troops BN DFAC; 8400 Ft. Lee

5. LOCATION	6. FOOD/MENU ITEM	7. TIME	8. TEMP (F)	9. CORRECTIVE ACTION (Mandatory for non-compliance)
reach-in #1 CAT: 6	☒ AMBIENT TEMP	1115	38	
reach-in #2 CAT: 6	☒ AMBIENT TEMP	1118	38	
reach-in #2 CAT: 5	macaroni salad ☐ AMBIENT TEMP	1120 1135	52 37	place in ice bath for rapid cooling
walk-in refer CAT: 6				
salad bar #1 CAT: 5				
salad bar #1 CAT: 5				
salad bar #2 CAT: 5				

Record follow-up temperature checks a minimum of two temperature checks ar

DA FORM 7459

RISK MANAGEMENT DATA LOG - COOLING COOKED ITEMS
For use of this form, see DA PAM 30-22; the proponent agency is DCS, G4.

1. DATE (YYYYMMDD): 20020531 | 2. MEAL: ☐ BREAKFAST ☒ LUNCH ☐ DINNER ☐ OTHER

PROCESS: COOLING
Hot leftovers must be cooled to ≤ 70F within 2 hours, then to ≤ 40F within an additional 4 hours.

3a. MONITORED BY: SSG Piggott
3b. TITLE: Shift Leader
3c. UNIT: 49th STB DFAC; 8400 Ft. Lee

4. FOOD/MENU ITEM	5. COOLING DATA	6. CORRECTIVE ACTION (Mandatory if cooling time not met)
Roast pork	START TIME: 1300 1320 78 1340 52 1350 40	☐ RAPID REHEAT TO 165F ☐ DISCARD COOLING TECHNIQUE USED ☐ REDUCE BATCH SIZE ☒ ICE BATH ☐ STIR ☐ SLICE ☒ OTHER slices layered in 2-inch pan
Chili with beef	START TIME: 1305 1320 148 1400 132 1500 98 1530 168	☒ RAPID REHEAT TO 165F ☐ DISCARD COOLING TECHNIQUE USED ☐ REDUCE BATCH SIZE ☐ ICE BATH ☐ STIR ☐ SLICE ☒ OTHER placed in 5 gal pot in walk-in for use at dinner
Re-heated chili with beef from previous line	START TIME: 1530 1530 168 1545 112 1600 68 1615 39	☐ RAPID REHEAT TO 165F ☐ DISCARD COOLING TECHNIQUE USED ☒ REDUCE BATCH SIZE ☒ ICE BATH ☒ STIR ☐ SLICE ☒ OTHER corrective training for proper cooling provided to cook
	START TIME:	☐ RAPID REHEAT TO 165F ☐ DISCARD COOLING TECHNIQUE USED ☐ REDUCE BATCH SIZE ☐ ICE BATH ☐ STIR ☐ SLICE ☐ OTHER

DA FORM 7460

USAPA V1.00

Contract Requirements

- Part of Quality Control Plan
- Apply HACCP principles as part of routine duties
- Documentation of HACCP plan
- Records *(SOPs, training, work orders…)*

Part of the Gov't Quality Assurance Plan

The Last Word!

"The best HACCP plan in the world isn't going to eliminate risk; but it will help us reduce the potential for risk and its magnitude."

-H. RUSSELL CROSS, PH.D.

Hazard Analysis Critical Control Point

Summary

- Define HACCP
- Understand HACCP Principles
- Identify Control Points & Critical Control Points
- Know Contract Requirements

? Questions ?